

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~A layer 2 network access device for providing network security,~~
comprising:
a plurality of input ports;
a switching fabric ~~in the layer 2 network access device~~ for routing data received on the
plurality of input ports to at least one output port; and
control logic ~~in the layer 2 network access device~~ adapted to authenticate a physical address
of a user device coupled to one of the plurality of input ports, to authenticate user
information provided by a user of the user device only if the physical address is valid,
and to restrict access to the one of the plurality of input ports in accordance with a user
policy associated with the user information only if the user information is valid.
2. (Previously Presented) The network access device of claim 1, wherein the physical address
comprises a Media Access Control (MAC) address.
3. (Previously Presented) The network access device of claim 1, wherein the control logic is
adapted to authenticate the user information in accordance with an IEEE 802.1x protocol.
4. (Previously Presented) The network access device of claim 1, wherein the user policy
identifies an access control list.

5. (Previously Presented) The network access device of claim 1, wherein the user policy includes an access control list.
6. (Previously Presented) The network access device of claim 1, wherein the user policy identifies a Media Access Control (MAC) address filter.
7. (Previously Presented) The network access device of claim 1, wherein the user policy includes a Media Access Control (MAC) address filter.
8. (Previously Presented) The network access device of claim 1, wherein the control logic is adapted to send the user information to an authentication server and to receive an accept message from the authentication server if the user information is valid.
9. (Previously Presented) The network access device of claim 8, wherein the authentication server comprises a Remote Authentication Dial-In User Service (RADIUS) server.
10. (Previously Presented) The network access device of claim 8, wherein the accept message includes the user policy.
11. (Currently Amended) The network access device of claim 1, wherein the control logic is further adapted to assign the one of the plurality of input ports to a virtual local area network (VLAN) (~~ULAN~~) associated with the user information if the user information is valid.

12. (Currently Amended) The network access device of claim 11, wherein the control logic is adapted to receive a message from an authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information, and to assign the one of the plurality of input ports to a VLAN ~~ULAN~~ associated with the VLAN ID.
13. (Currently Amended) A method for providing network security, comprising:
 - authenticating in a ~~layer-2~~ network access device a physical address of a user device coupled to a port of the network access device;
 - authenticating user information provided by a user of the user device to the network access device only if the physical address is valid; and
 - restricting access to the port in accordance with a user policy associated with the user information only if the user information is valid.
14. (Previously Presented) The method of claim 13, wherein the authenticating a physical address comprises authenticating a Media Access Control (MAC) address.
15. (Previously Presented) The method of claim 13, wherein the authenticating the user information comprises authenticating the user information in accordance with an IEEE 802.1x protocol.
16. (Previously Presented) The method of claim 13, wherein the restricting access comprises restricting access to the one of the plurality of input ports in accordance with an access control list.

17. (Previously Presented) The method of claim 13, wherein the restricting access comprises restricting access to the one of the plurality of input ports in accordance with a Media Access Control (MAC) address filter.
18. (Previously Presented) The method of claim 13, wherein the authenticating the user information comprises:
sending the user information to an authentication server; and receiving an accept message from the authentication server if the user information is valid.
19. (Previously Presented) The method of claim 18, wherein the authentication server comprises a Remote Authentication Dial-In User Service (RADIUS) server.
20. (Previously Presented) The method of claim 18, wherein the receiving an accept message comprises receiving an accept message that includes the user policy.
21. (Previously Presented) The method of claim 13, further comprising:
assigning the port to a virtual local area network (VLAN) associated with the user information only if the user information is valid.
22. (Previously Presented) The method of claim 21, wherein the assigning the port to a VLAN comprises:

receiving a message from an authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information; and
assigning the port to a VLAN associated with the VLAN ID.

23. (Currently Amended) A network system, comprising: a data communications network;
a ~~layer 2~~ network access device coupled to the data communications network; and
a user device coupled to a port of the network access device;
wherein the network access device is adapted to authenticate a physical address of the user device, to authenticate user information provided by a user of the user device only if the physical address is valid, and to restrict access to the port in accordance with a user policy associated with the user information only if the user information is valid.
24. (Previously Presented) The system of claim 23, wherein the physical address comprises a Media Access Control (MAC) address.
25. (Previously Presented) The system of claim 23, wherein the network access device is adapted to authenticate the user information in accordance with an IEEE 802.1x protocol.
26. (Previously Presented) The system of claim 23, wherein the user policy identifies an access control list.
27. (Previously Presented) The system of claim 23, wherein the user policy includes an access control list.

28. (Previously Presented) The system of claim 23, wherein the user policy identifies a Media Access Control (MAC) address filter.
29. (Previously Presented) The system of claim 23, wherein the user policy includes a Media Access Control (MAC) address filter.
30. (Previously Presented) The system of claim 23, further comprising:
an authentication server coupled to the data communications network;
wherein the network access device is adapted to send the user information to the
authentication server and to receive an accept message from the authentication server if
the user information is valid.
31. (Previously Presented) The system of claim 30, wherein the authentication server comprises
a Remote Authentication Dial-In User Service (RADIUS) server.
32. (Previously Presented) The system of claim 30, wherein the accept message includes the
user policy.
33. (Previously Presented) The system of claim 23, wherein the network access device is
further adapted to assign the port to a virtual local area network (VLAN) associated with the
user information if the user information is valid.

34. (Previously Presented) The system of claim 33, further comprising:
- an authentication server coupled to the data communications network;
 - wherein the network access device is adapted to receive a message from the authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information, and to assign the port to a VLAN associated with the VLAN ID if the user information is valid.
35. (Previously Presented) The network access device of claim 2 wherein the control logic is further configured to:
- if authentication of the MAC address indicates the MAC address is invalid,
 - drop packets from the user device; or
 - disable the port;
 - if authentication of the user information indicates the user information is invalid, block all traffic on the port except for packets related to a user authentication protocol;
 - if authentication of user information indicates the user information is valid, determine whether the user is associated with a VLAN supported by the network access device;
 - if the user is not associated with the VLAN,
 - assign the port to a port default VLAN; and
 - block all traffic on the port except for packets related to the user authentication protocol; and
 - if the user is associated with the VLAN,
 - assign the port to the VLAN associated with the user; and
 - forward packets from the user device.

36. (Previously Presented) The method of claim 14, further comprising:
- if the authenticating of the MAC address indicates the MAC address is invalid,
 - dropping packets from the user device; or
 - disabling the port;
 - if the authenticating user information indicates the user information is invalid, blocking all traffic on the port except for packets related to a user authentication protocol;
 - if the authenticating user information indicates the user information is valid, determining whether the user is associated with a VLAN supported by the network access device;
 - if the determining indicates the user is not associated with the VLAN,
 - assigning the port to a port default VLAN; and
 - blocking all traffic on the port except for packets related to the user authentication protocol; and
 - if the determining indicates the user is associated with the VLAN,
 - assigning the port to the VLAN associated with the user; and
 - forwarding packets from the user device.
37. (Previously Presented) The network system of claim 24 wherein the network access device is further adapted to:
- if authentication of the MAC address indicates the MAC address is invalid,
 - dropping packets from the user device; or
 - disabling the port;

if authentication of the user information indicates the user information is invalid, block all traffic on the port except for packets related to a user authentication protocol;

if authentication of user information indicates the user information is valid, determine whether the user is associated with a VLAN supported by the network access device;

if the user is not associated with the VLAN,
assign the port to a port default VLAN; and

block all traffic on the port except for packets related to the user authentication protocol; and

if the user is associated with the VLAN,
assign the port to the VLAN associated with the user; and
forward packets from the user device.

38. (Currently Amended) An apparatus ~~for providing network security~~, comprising:

a plurality of input ports;

a switching fabric for routing data received on the plurality of input ports to at least one output port; and

control logic adapted to:

authenticate a physical address of a user device coupled to one of the plurality of input ports;

drop packets from the user device if the physical address is invalid;

authenticate user information provided by a user of the user device only if the physical address is valid;

if authentication of the user information indicates the user information is invalid, block all traffic on the one of the plurality of input ports except for packets related to a user authentication protocol;

if authentication of user information indicates the user information is valid, determine whether the user is associated with a VLAN supported by the apparatus by receiving a message from an authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information;

if the user is not associated with the VLAN,
assign the one of the plurality of input ports to a port default VLAN; and
block all traffic on the one of the plurality of input ports except for packets related to the user authentication protocol; and

if the user is associated with the VLAN,
assign the one of the plurality of ports to the VLAN associated with the user; and
restrict access to the one of the plurality of input ports in accordance with a user policy associated with the user information.

39. (Previously Presented) The apparatus of claim 38, wherein the apparatus comprises a layer 2 network access device.

40. (Previously Presented) A method for providing network security, comprising:
authenticating a physical address of a user device coupled to a port of a network access device;
dropping packets from the user device if the physical address is invalid;

authenticating user information provided by a user of the user device only if the physical address is valid;

if the authenticating of the user information indicates the user information is invalid, blocking all traffic on the port except for packets related to a user authentication protocol;

if the authenticating of the user information indicates the user information is valid, determining whether the user is associated with a VLAN supported by the network access device by receiving a message from an authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information;

if the user is not associated with the VLAN,

assigning the one of the plurality of input ports to a port default VLAN; and

blocking all traffic on the one of the plurality of input ports except for packets related to the user authentication protocol; and

if the user is associated with the VLAN,

assigning the one of the plurality of ports to the VLAN associated with the user; and

restricting access to the one of the plurality of input ports in accordance with a user policy associated with the user information.

41. (Previously Presented) The method of claim 40, wherein the network switch comprises a layer 2 network access device.

42. (Previously Presented) A network system, comprising:
a data communications network;

a network access device coupled to the data communications network; and

a user device coupled to a port of the network switch, wherein the network access device is

adapted to:

authenticate a physical address of a user device coupled to one of the plurality of input ports;

drop packets from the user device if the physical address is invalid;

authenticate user information provided by a user of the device only if the physical address is valid;

if authentication of the user information indicates the user information is invalid, block

all traffic on the one of the plurality of input ports except for packets related to a user authentication protocol;

if authentication of user information indicates the user information is valid, determine

whether the user is associated with a VLAN supported by the network access device by receiving a message from an authentication server, wherein the message comprises a VLAN identifier (ID) associated with the user information;

if the user is not associated with the VLAN,

assign the one of the plurality of input ports to a port default VLAN; and

block all traffic on the one of the plurality of input ports except for packets related to the user authentication protocol; and

if the user is associated with the VLAN,

assign the one of the plurality of ports to the VLAN associated with the user; and

restrict access to the one of the plurality of input ports in accordance with a user policy associated with the user information.

43. (Previously Presented) The network system of claim 42, wherein the network access device comprises a layer 2 network access device.
44. (Previously Presented) The device of Claim 1 wherein the user information comprises a user name and a password.
45. (Previously Presented) The method of Claim 13 wherein the user information comprises a user name and a password.
46. (Previously Presented) The system of Claim 23 wherein the user information comprises a user name and a password.